

The Editor's Page -- Innovation: Celebrated But Threatened

Dwindling supply of mathematicians, scientists and engineers is reason for alarm.



By Patricia Panchak

We all know innovation drives economic growth, but what drives innovation? Is it knowledge? Technology? An entrepreneurial corporate culture? A good tax environment? Each of these and probably many more elements provide fertile ground for innovation, but there is one element -- the seed, if you will -- without which innovation will not flourish. The real secret to innovation lies in the world's most valuable resource -- people.

I'm not just referring to college graduates and MBAs. At **IW** we recognize the value and contributions of all people: Our Best Plants program champions vitally important production workers, the Best Manufacturing Companies special report spotlights executive teams, and nearly every issue lauds a leading executive.

In this issue, though, we feature our annual Technology and Innovation Awards program and "R&D Stars to Watch" list, which celebrates the contributions of those who provide the initial spark to economic growth -- scientists and inventors. These individuals not only create new products and services that generate new businesses, they also create the technologies that enable us to communicate and collaborate more effectively, that lead the way to the future of manufacturing and our economy and, yes, inspire us all to dream of a better future.

That's why it's disheartening to read as we put this issue to bed the results of a nationwide science test showing that only 18% of the nation's high-school seniors are proficient in science -- a decline from 21% in 1996 when the test was last taken. Scores from the national math test, reported in August, showed a similar decline in math proficiency. Other statistics from the National Center for Education show dramatic declines in the number of bachelor's degrees awarded each year in engineering (down 25% from its peak in 1985), math (down 30% from its peak in 1970) and the physical sciences (down 23.5% from its peak in 1982). We seem to be watching the lifeblood of innovation -- expertise in science, math and engineering -- drain away.

This dwindling supply of mathematicians, scientists, and engineers hits the manufacturing sector harder than other sectors of the economy that don't require such expertise, so it's up to manufacturers to sound the alarm. Though manufacturers and manufacturing associations already commit considerable time and resources to this problem, we must do more. Even as we lobby the government for a stimulus package to spur immediate economic growth, we need to demand that education funding on all levels be spared the ax to ensure future growth. We need to push for and contribute to efforts to strengthen the nation's science and math curriculum at all levels. And we need to address the root cause of the problem and convince a skeptical public -- from the high school students to many of our government and other business leaders -- that manufacturing and the disciplines that drive it -- especially research and development -- form the backbone of our economy.

Patricia Panchak is IW's editor-in-chief. She is based in Cleveland.